Claims

1. A method for learning and training dental treatment techniques, according to which forces are applied to a tooth (2) held in an artificial mandible (1) by means of a tool (4) or by hand in order to examine or treat the tooth (2), in which case the mandible (1) or the tooth (2) is coupled with a force measuring device (3) which converts the forces applied to the tooth (2) into electric measurement signals (5) that are fed to a data processing device (6) which comprises a data memory (7) in which a multitude of reference force/time courses of different treatment steps are stored in a manner that enables them to be retrieved, the method comprising the following steps:
- selection of a reference force/time course appropriate to a tooth treatment to be learned or trained,
- start of the simulated tooth treatment,
- measuring of the forces applied to the tooth (2) by means of a tool or by hand by means of the force measuring device (3) coupled with the mandible (1) or the tooth (2) and determination of the amount and direction thereof in the course of the time, whereby
this actual force/time course is simultaneously with the selected reference force/time course or values derived from it represented on an optic display unit, and
- determination as to whether the force/time courses or values derived from them show a predetermined correlation among each other.

2. A method as per claim 1 **characterized in that** the measured force/time course is converted into a movement/time course, visualized and compared with a stored reference movement/time course.

3. A method as per claims 1 and 2 **characterized in that** acoustic signal patterns stored in correlation with the measured force/time course are retrieved and displayed by an acoustic display unit.

4. A method according to any one of the above mentioned claims **characterized in that** the spatial position of the force application point of the tool (4) is determined by means of a navigation system (9, 10, 11, 12).

5. A method according to any one of the above mentioned claims **characterized in that** at least one force sensor (8) is arranged at the tool (4) the measurement signal of which is fed to the measurement signal (5) of the force measuring device (3) at the tooth (2) or at the mandible (1) for the purpose of a measured-value correction.

6. A device for learning and training dental treatment techniques according to which forces are applied to a tooth (2) held in an artificial mandible (1) by means of a tool (4) or by hand in order to examine or treat the tooth (2) **characterized in that** the tooth (2) or the mandible (1)
- is coupled with a force measuring device (3) which converts the forces applied to the tooth (2) into electric measurement signals (5), which
- are fed to a data processing device (6), which
- comprises a data memory (7), in which
- a multitude of reference force/time courses of different tooth treatment steps are stored as value table in a manner that enables them to be retrieved, and
a programme is provided which controls the data processing device (6) in a way that allows the selected reference force/time course and the actual force/time course of the simulated tooth treatment to be represented on an optic display.

7. A device as per claim 6 **characterized in that** an acoustic display unit is provided and a multitiude of sound-samples are stored in the data memory (7), in which case by means of a program subject to the actual force/time course of the simulated tooth treatment a sound-sample belonging to it can be played.

8. A device as per claims 6 or 7 **characterized in that** at least one force measuring device (8) is arranged at the tool (4) and formed to measure the force applied by the tool (4), and that further a control and correction program is pro-
5   vided which calculates a measured-value correction of the forces measured at the tooth (2) or at the mandible (1).

9. A device as per claims 6 to 8 **characterized in that** a navigation system (9, 10, 11, 12) for the determination of
10 the position of the tool application point is provided.

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